March 20, 1943

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CONTROL, R-3
Insect
Annual Report
1942

Chief
Forest Service
Washington, D. C.

Dear Sir:

A summary of the annual reports received from Forest Supervisors and from individual forest officers traveling through the Region indicate that forest insect conditions for the region were normal during 1942, except for a small area within the Carson Forest.

BARK BEETLES
(Dendroctonus and Ips)

The reports indicate that the damage and losses during 1942 caused by bark beetles were below normal on eight of the forests, and normal or below on four others, leaving the Carson Forest with damage above normal for a small area. The outbreak of Dendroctonus beetles on the Carson, within the Agua Caliente Canyon drainage, was reported in the 1941 Annual Insect Report. The beetles were identified as Black Hills, Dendroctonus ponderosae Hopk. Plans were made to do control work on this area during the fall of 1941, but this was not accomplished, on account of labor shortage and storm, until the spring of 1942, when it was carried out as follows:

Year: 1942
Project Name: Agua Caliente Control Project
Forest: Carson
Duration of Project: May 12 to June 5, 1942
Tree Species Affected: Ponderosa pine
Insect Responsible: Black Hills Beetle (Dendroctonus ponderosae Hopk.)
Total Acreage Involved: 640 acres

Method followed: Trees were cut, bark peeled and burned; smaller trees - logs burned or bark charred.
Number of Trees Spotted: 698 trees
Number of Trees Treated: 666 trees
Expenditure from Project Funds: 1,038.72
Expenditure Contributed Time and Expenses: $82.35
Total cost of project: $1,121.07
Total cost per tree: $1.68
Percent of Reduction Obtained: 67 percent.
Number of Man Days Used: 269
Results: The results of the control work done on this project were checked by Ranger David O. Scott during October, 1942. He states that although the infestation was reduced 67 percent there will be some group killing in 1943. It is estimated from counts made in October that these groups will vary in number from 3 to 16 trees.

An examination of the area will be made early this summer to determine the extent to which the damage is increasing or decreasing. It is doubtful if control work could be done this year on account of lack of funds and shortage of labor.

The Prescott Forest reports only an occasional mature ponderosa pine tree attacked and killed by Dendroctonus beetles. On an average, the killing was below that of any year during the past ten years.

The Kaibab Forest reports that from observation during the year only an occasional tree on the forest north of the Grand Canyon was killed by beetles. Ips did some damage to reproduction and poles on sale areas cut over during the year. This damage by Ips is not considered serious, since these attacks seldom last any length of time.

TIP MOTH
(Rhyacionia neomexicana Dyar.)

Damage by tip moth during the year was below normal throughout the Region.

SPRUCE BUDWORM
(Archips fumiferana)

Damage by the spruce budworm was reported from the Carson, Santa Fe and Cibola Forests. The Carson reports a heavy infestation on the Tres Piedras and Rio Pueblo areas, with considerable mortality in the young stands

of white fir, with less mortality in the Douglas fir. The infestation on the Canjilon and Vallecitos areas was lighter than in past years, with small mortality. The infestation on the Santa Fe, located in the Pecos River area, continues as in the past with no mortality reported. The Cibola Forest reports that the infestation in the Sandia area has spread considerably during 1942; however, the area infested during 1941 shows no serious results with apparently no mortality. The control of the spruce budworm is one of the most important insect problems in the fir timber type of this region.

ASPEN LEAF ROLLER
(Archips conflictana Walker)

The aspen leaf roller was reported first from the Carson Forest in 1940 under the heading "Leaf Miners." Specimens were collected by Ranger David O. Scott and were identified by the Bureau of Entomology. Infestations of the leaf roller are reported from the Carson and Santa Fe Forests and Mr. Salton of this office observed the work of the leaf rollers in aspen stands on the Mt. Taylor Division of the Cibola Forest. The reports indicate that the infestations are spreading to new areas. However, Ranger Scott of the Carson observed that areas defoliated by leaf rollers during 1941, were not reattacked during 1942, and that over 75 percent of the leaf roller larvae examined during 1942 were parasitized. This would indicate that natural control agents build up in a very short period of time and will control the leaf roller infestation before permanent damage occurs to the trees.

GREAT BASIN TENT CATERPILLAR
(Malacosoma fragilis)

Reports from the forests show that the attacks by tent caterpillars were nearly all in the endemic stage this year. The Carson reported that the tent caterpillar outbreaks appear to have died out on the forest except for two small areas near the head of Tanques and Oso Canyons on the Tres Piedras Ranger District. The area to the northwest of the San Antone Guard Cabin was only normally infested last year. Reports from the Santa Fe Forest state that attacks of the tent caterpillar have dropped nearly to the vanishing point in all parts of the forest in which they have been reported in epidemic stages prior to last year. This is in accordance with the predictions made by Dr. N. D. Wygant of the Forest Insect Laboratory after his examination of areas on the Carson and Santa Fe during August, 1941. Dr. Wygant recommended the liberating of Calosoma sycophanta, a predator beetle which feeds on the larvae and pupae

of a number of Lepidoptera and a parasite fly (Compsilura concinata), both of which have been used in New England in the control of the gypsy and brown-tailed moths. During June, 1942, 1500 of the Calosoma beetles and 800 of the Compsilura flies were released on areas in the vicinity of Big Tesuque Canyon and Aspen Basin Trail. It is planned to check these areas to determine if the predators and parasites have survived and have been a factor in the control of the tent caterpillars.

MATSUCOCCUS SCALE

The Prescott Forest reports that damage from the Matsucoccus scale was very light during the year, with practically no new kill during the summer or fall.

SOUTHWESTERN TIGER MOTH

Ranger David O. Scott reports finding the Southwestern tiger moth feeding on pinon pine on the Rio Pueblo District of the Carson Forest in February and March. No webs were found on ponderosa pine. He reports that during 1941 the larvae were heavily parasitized which may have been a controlling factor.

No examination or inspections were made in the Region during the year by entomologists from the Bureau of Entomology.

Very truly yours,

FRANK C. W. POOLER, Regional Forester

By: Acting

RCSalton:ASG